

ATTACHMENT A

Clean Replacement/New Claims (entire set of pending claims)

Following herewith is a clean copy of the entire set of pending claims.

A. 1. 1. A non-return valve comprising:

a valve body including a fluid passageway which defines a fluid inlet and a fluid outlet located on a low pressure and a high pressure side of the valve, respectively, the fluid passageway being adapted to allow a flow of fluid from the inlet to the outlet; and

a valve diaphragm in the form of a conical-shaped diaphragm having a collapsible aperture located at or adjacent its apex which is orientated in a downstream flow direction and directed toward the high pressure side of the valve, said diaphragm being connected across the fluid passageway and being constructed of a resiliently flexible material wherein the diaphragm itself initiates closure of the collapsible aperture, said closure being further promoted by fluid on the high pressure side of the valve to thus prevent fluid flowing in a reverse direction toward the inlet whereas the application of pressure, exceeding atmospheric pressure and that on the high pressure side, to an inlet side of the diaphragm deflects the diaphragm to expose the aperture and allow fluid to flow through the passageway from the inlet to the outlet only.

2. A non-return valve as defined in claim 1 wherein the pressure is imposed on the inlet side of the diaphragm via a fluid nozzle.

3. A non-return valve as defined in claim 2 wherein the valve body is designed to fit to a reservoir or tank in which fluid is to be dispensed via the fluid nozzle.

4. A non-return valve including a bank or series of non-return valves of similar construction coupled to one another, each of said non-return valves comprising:

a valve body including a fluid passageway which defines a fluid inlet and a fluid outlet, the fluid passageway being adapted to allow a flow of fluid from the inlet to the outlet; and

a valve diaphragm being connected across the fluid passageway and including a collapsible aperture, the valve diaphragm being constructed of a resiliently flexible material and being configured wherein the diaphragm itself in a collapsed condition effects closure of the collapsible aperture to prevent fluid flowing in a reverse direction toward the inlet whereas pressure imposed on an inlet side of the diaphragm deflects the diaphragm to expose the aperture and allow fluid to flow through the passageway from the inlet to the outlet only.

5. A non-return valve as defined in claim 4 wherein the non-return valves are coupled together with their respective valve bodies at least partly nested within one another wherein said valves are co-axially aligned.
6. A non-return valve as defined in claim 4 wherein the non-return valves are each of the same construction and configured to abut or engage one another with their valve bodies in alignment.
7. (amended) A non-return valve as defined in claim 4 wherein the diaphragms are each in the form of a generally conical-shaped diaphragm having the collapsible aperture located at or adjacent its apex which is orientated in a downstream flow direction.
8. (amended) A non-return valve as defined in claim 1 wherein the valve membrane is formed integral with the valve body.
9. (amended) A non-return valve as defined in claim 1 wherein the valve membrane is constructed of a mouldable polymeric material.
10. (amended) A non-return valve as defined in claim 1 wherein the valve body is configured to retrofit to an existing valve stem.

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11. (amended) A non-return valve as defined in claim 1 wherein the valve body is designed to be sealably inserted into a flow line.

12. A membrane being permeable in one direction only, said membrane comprising a panel or blanket of collapsible diaphragms each including a collapsible aperture and being constructed of a resiliently flexible material which is configured wherein each of the diaphragms themselves effects closure of the collapsible aperture to prevent fluid flowing in a reverse direction whereas pressure imposed on an upstream side of the membrane deflects one or more of the diaphragms to expose the corresponding aperture and allow fluid to flow across the membrane in said one direction only.

13. A membrane as defined in claim 12 wherein the membrane is multi-layered with a series of said panels or blankets formed adjacent one another.
